

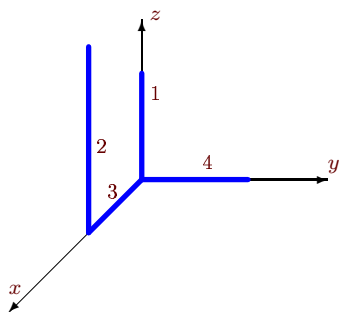
# Центр тяжести пространственной стержневой фигуры

Найти координаты центра тяжести пространственной фигуры, состоящей из четырех однородных стержней. Размеры даны в метрах.

Кирсанов М.Н. **Решебник. Теоретическая механика**/Под ред. А. И. Кириллова.– М.: ФИЗМАТЛИТ, 2008. — 384 с. (с.122.)

Задача S-21.1.

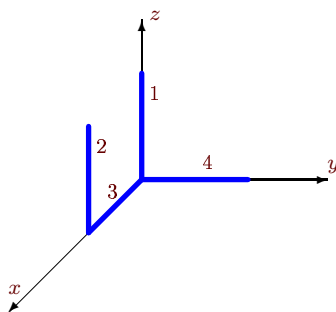
11



$$l_1 = 8, l_2 = 24, l_3 = 16, l_4 = 16.$$

Задача S-21.2.

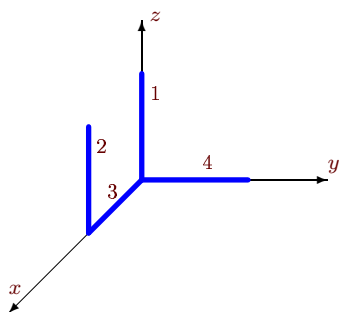
11



$$l_1 = 10, l_2 = 10, l_3 = 10, l_4 = 20.$$

Задача S-21.3.

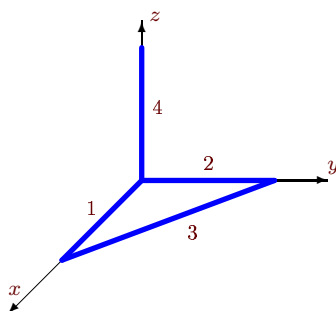
11



$$l_1 = 10, l_2 = 10, l_3 = 20, l_4 = 10.$$

Задача S-21.4.

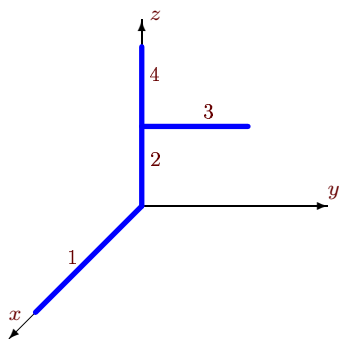
11



$$l_1 = 9, l_2 = 12, l_3 = 15, l_4 = 18.$$

Задача S-21.5.

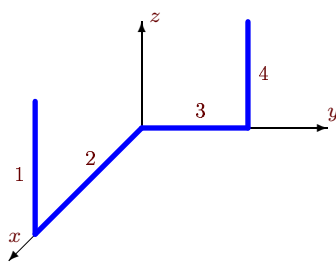
11



$$l_1 = 6, l_2 = 3, l_3 = 6, l_4 = 3.$$

Задача S-21.6.

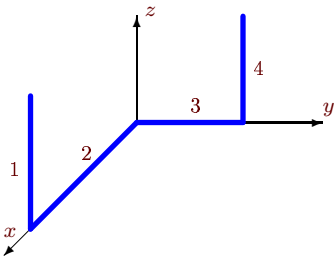
11



$$l_1 = 12, l_2 = 24, l_3 = 12, l_4 = 24.$$

Задача S-21.7.

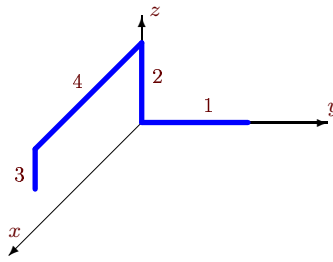
11



$$l_1 = 10, l_2 = 10, l_3 = 10, l_4 = 20.$$

Задача S-21.8.

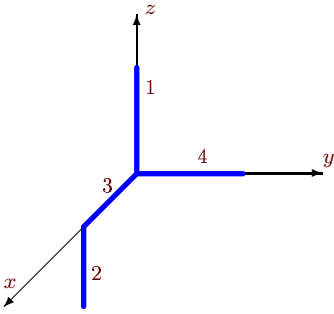
11



$$l_1 = 12, l_2 = 24, l_3 = 12, l_4 = 24.$$

Задача S-21.9.

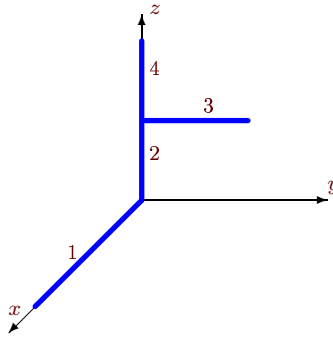
11



$$l_1 = 4, l_2 = 4, l_3 = 8, l_4 = 16.$$

Задача S-21.10.

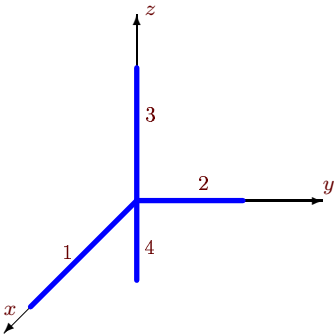
11



$$l_1 = 12, l_2 = 9, l_3 = 12, l_4 = 3.$$

Задача S-21.11.

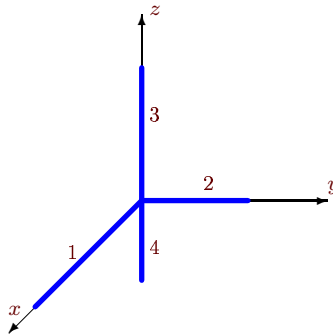
11



$$l_1 = 12, l_2 = 24, l_3 = 8, l_4 = 28.$$

Задача S-21.12.

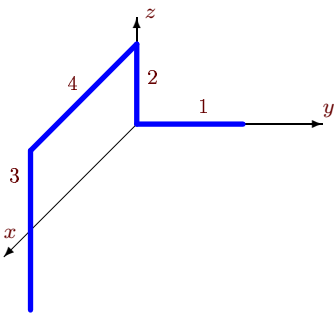
11



$$l_1 = 12, l_2 = 24, l_3 = 10, l_4 = 26.$$

Задача S-21.13.

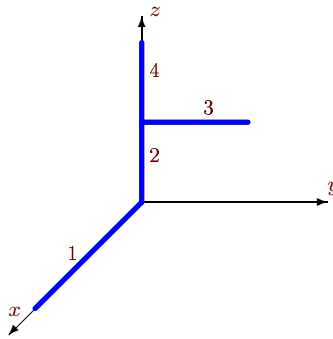
11



$$l_1 = 12, l_2 = 12, l_3 = 24, l_4 = 24.$$

Задача S-21.14.

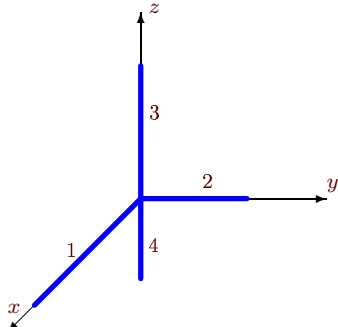
11



$$l_1 = 12, l_2 = 3, l_3 = 12, l_4 = 9.$$

Задача S-21.15.

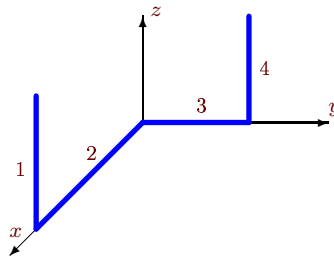
11



$$l_1 = 12, l_2 = 24, l_3 = 14, l_4 = 22.$$

Задача S-21.16.

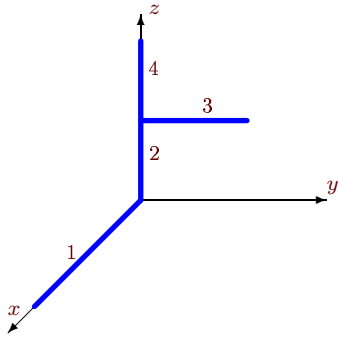
11



$$l_1 = 20, l_2 = 10, l_3 = 10, l_4 = 10.$$

Задача S-21.17.

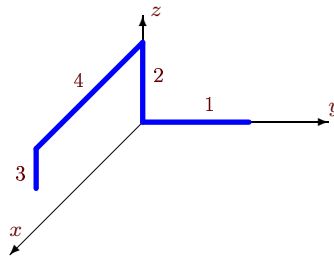
11



$$l_1 = 20, l_2 = 10, l_3 = 10, l_4 = 10.$$

Задача S-21.18.

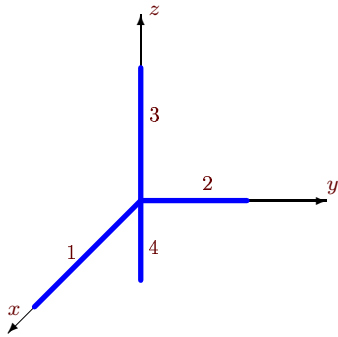
11



$$l_1 = 12, l_2 = 24, l_3 = 12, l_4 = 24.$$

Задача S-21.19.

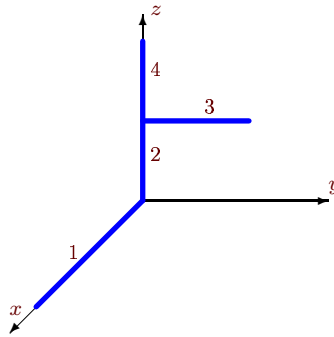
11



$$l_1 = 12, l_2 = 24, l_3 = 20, l_4 = 16.$$

Задача S-21.20.

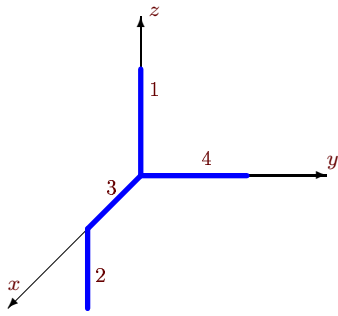
11



$$l_1 = 6, l_2 = 3, l_3 = 6, l_4 = 3.$$

Задача S-21.21.

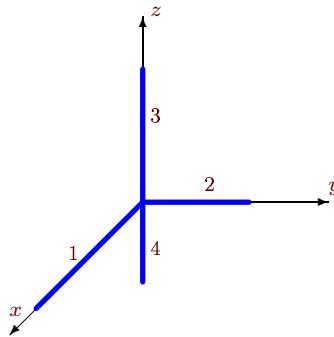
11



$$l_1 = 12, l_2 = 4, l_3 = 8, l_4 = 8.$$

Задача S-21.22.

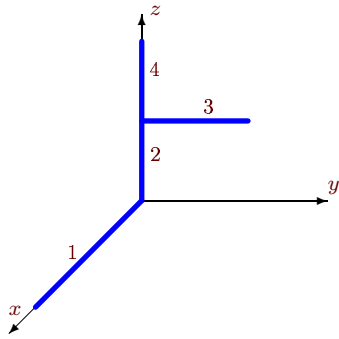
11



$$l_1 = 12, l_2 = 24, l_3 = 20, l_4 = 16.$$

Задача S-21.23.

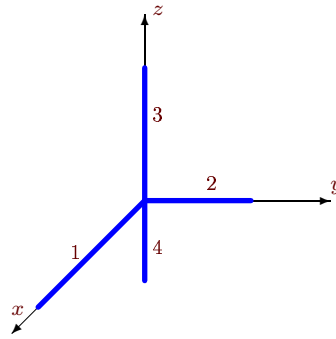
11



$l_1 = 8, l_2 = 4, l_3 = 8, l_4 = 12.$

Задача S-21.24.

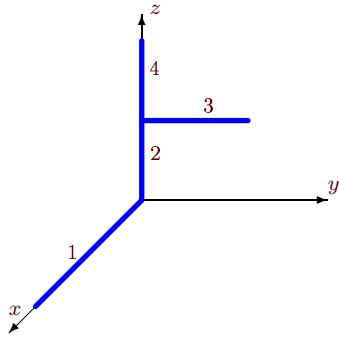
11



$l_1 = 10, l_2 = 20, l_3 = 5, l_4 = 15.$

Задача S-21.25.

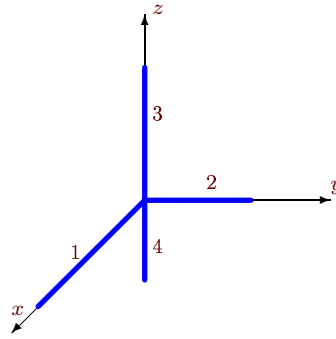
11



$l_1 = 12, l_2 = 9, l_3 = 12, l_4 = 3.$

Задача S-21.26.

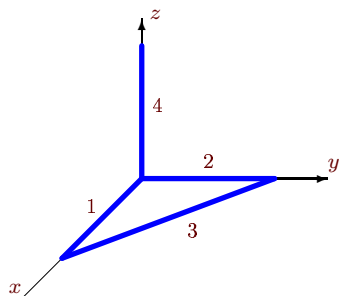
11



$l_1 = 12, l_2 = 24, l_3 = 14, l_4 = 22.$

Задача S-21.27.

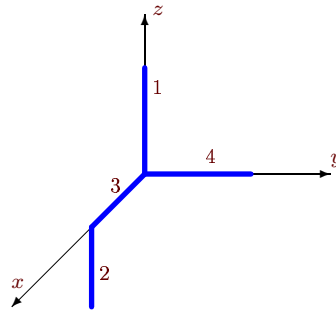
11



$l_1 = 9, l_2 = 12, l_3 = 15, l_4 = 18.$

Задача S-21.28.

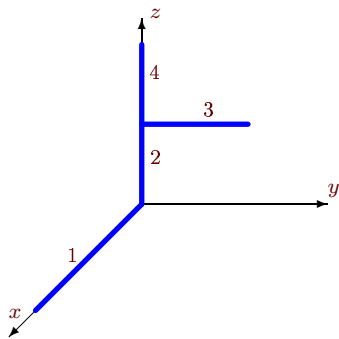
11



$l_1 = 12, l_2 = 4, l_3 = 8, l_4 = 8.$

Задача S-21.29.

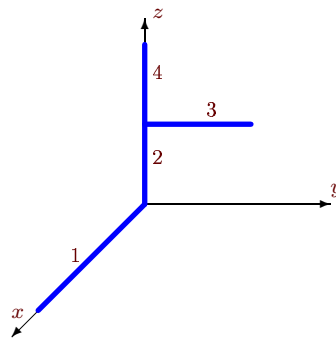
11



$l_1 = 20, l_2 = 10, l_3 = 10, l_4 = 10.$

Задача S-21.30.

11



$l_1 = 6, l_2 = 3, l_3 = 6, l_4 = 3.$

**Ответы.**

**Центр тяжести пространственной стержневой фигуры**

17.02.2015

	$x_c$	$y_c$	$z_c$	$L$
1	8	2	5	64
2	3	4	2	50
3	8	1	2	50
4	2	3	3	54
5	1	1	2	18
6	8	5	5	72
7	3	5	5	50
8	8	1	15	72
9	2	4	0	32
10	2	2	5	36
11	1	4	-5	72
12	1	4	-4	72
13	12	1	5	72
14	2	2	3	36
15	1	4	-2	72
16	5	3	5	50
17	4	1	6	50
18	8	1	15	72
19	1	4	1	72
20	1	1	2	18
21	2	1	2	32
22	1	4	1	72
23	1	1	5	32
24	1	4	-2	50
25	2	2	5	36
26	1	4	-2	72
27	2	3	3	54
28	2	1	2	32
29	4	1	6	50
30	1	1	2	18

S-21 файл o21s11A